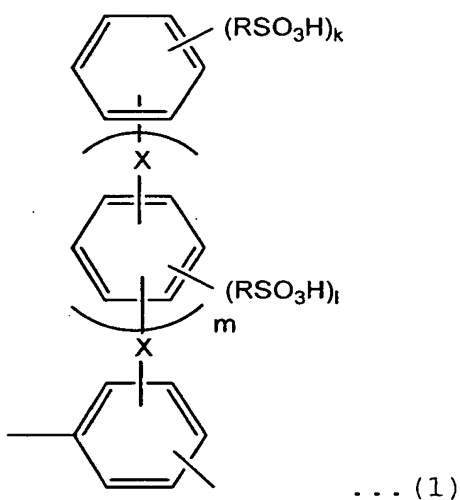**CLAIMS**

1.   A polymer electrolyte comprising at least one

polymer selected from polyether, polyketone, polyetherketone,

5   polysulfone, polyethersulfone, polyimide, polyetherimide,

polybenzimidazole, polybenzothiazole, polybenzoxazole,

polyphenylenesulfide, polyhydantoin, polyquinoxaline,

polyquinoline, polyoxadiazole and polyparabanic acid,

said polymer comprising a repeating structural unit

10   having one or both of an aromatic ring and a heterocyclic ring

and a repeating structural unit represented by the formula (1):

...(1)

wherein X denotes a single bond, an electron-withdrawing group

or an electron-donating group; R denotes a single bond, $-(CH_2)_q-$

15   or $-(CF_2)_q-$ where q ranges from 1 to 10; m denotes an integer

of 0 to 10 and when m is from 1 to 10 Xs may be the same as

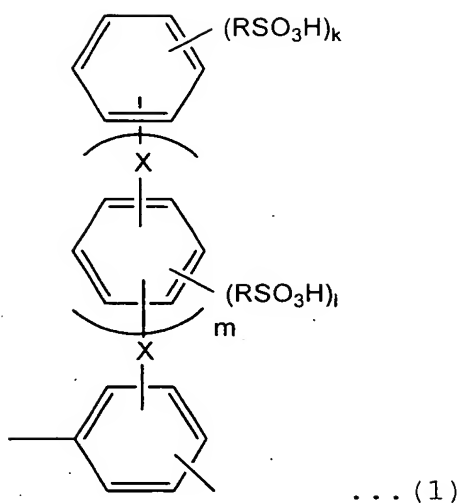or different from one another; k denotes an integer of 0 to

5; l denotes an integer of 0 to 4; and k + l ≥ 1.

2.   The polymer electrolyte according to claim 1,

containing the sulfonic acid group in an amount of 0.3 to 5.0

5   meq/g.

3.   A proton conductive membrane comprising the

polymer electrolyte as claimed in claim 1 or 2.

10   4.   A membrane-electrode assembly in which an

electrolyte membrane is sandwiched between a pair of

electrodes, said electrolyte membrane comprising at least one

polymer selected from polyether, polyketone, polyetherketone,

polysulfone, polyethersulfone, polyimide, polyetherimide,

15   polybenzimidazole, polybenzothiazole, polybenzoxazole,

polyphenylenesulfide, polyhydantoin, polyquinoxaline,

polyquinoline, polyoxadiazole and polyparabanic acid,

said polymer comprising a repeating structural unit

having one or both of an aromatic ring and a heterocyclic ring

20   and a repeating structural unit represented by the formula (1):

$$\ldots (1)$$

wherein X denotes a single bond, an electron-withdrawing group

or an electron-donating group; R denotes a single bond, $-(CH_2)_q-$

or $-(CF_2)_q-$ where q ranges from 1 to 10; m denotes an integer

5   of 0 to 10 and when m is from 1 to 10 Xs may be the same as

or different from one another; k denotes an integer of 0 to

5; l denotes an integer of 0 to 4; and $k + l \geq 1$.